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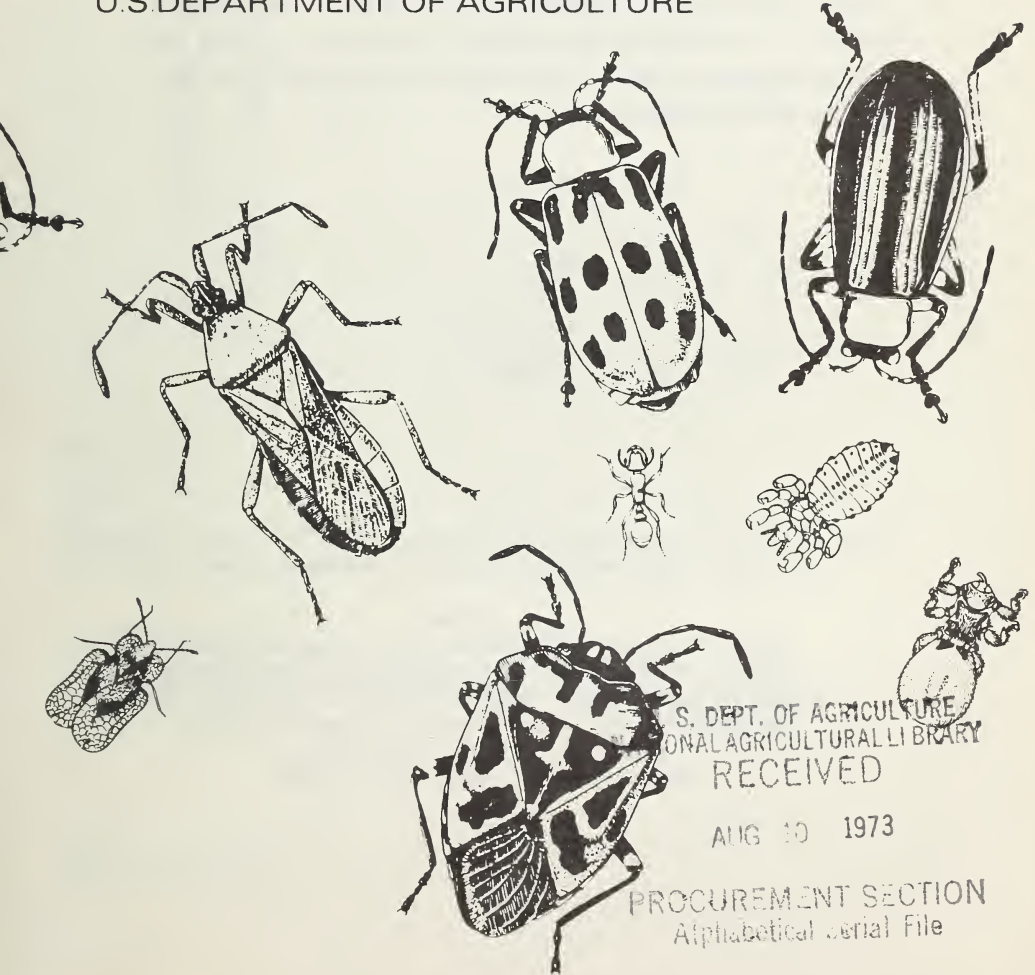
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Cooperative Economic Insect Report

Issued by
PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
U.S. DEPARTMENT OF AGRICULTURE



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ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
PEST SURVEY AND TECHNICAL SUPPORT STAFF

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

ARMYWORM infestations heavy on some grain crops in South Dakota, southeastern Minnesota, into Red River Valley, and in many localities of Wisconsin. Damage also reported in Iowa, Illinois, Michigan, Mississippi, and California. CORN LEAF APHID heavy in some sorghum in several Plains States. GREENBUG increased on sorghum in Nebraska, Kansas, and Oklahoma. (pp. 479-481).

EUROPEAN CORN BORER expected to be more damaging to corn in Western Kansas than in 1972. CORN ROOTWORM adult emergence continued in corn-growing areas; heavy in some localities. (pp. 482, 483).

PEA APHID at outbreak levels on alfalfa in areas of Washington and Idaho; heavy on second-growth alfalfa in central Maryland. (p. 484).

TARNISHED PLANT BUG heavy on much cotton in Tennessee River Valley in Alabama. (p. 487).

SPRUCE BUDWORM caused moderate to severe defoliation over much of spruce and fir region of Maine. (p. 489).

SCREWWORM continued heavy in Arizona. Several FLY pest species annoying to livestock, heavy in some areas. (pp. 490-492).

GRASSHOPPERS heavy in several Plains and Western States on rangeland and some crops. GYPSY MOTH population at lowest level in history of infestation in New Hampshire. (pp. 493, 494).

Detection

WOOLLY ALDER APHID reported as new State record in Oklahoma (p. 490).

For new county records see page 488.

Special Reports

Notice of Name Changes in Ants and Sawflies. (p. 498).

Reports in this issue are for week ending July 20 unless otherwise indicated.

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SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

BEEF LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Sugar beets surveyed in Stanislaus County showed low curly-top infection of 0-3 percent. Leafhoppers ranged 3-55 per 100 sweeps; 25 percent nymphs. One field southwest of Crows Landing showed curly-top infection of 42 percent; C. tenellus averaged 36 per 100 sweeps, nymphs just emerging. Tomatoes and peppers in this area and in northern Merced County showed less than one percent curly-top infection. (Cal. Coop. Rpt.).

ARMYWORM (Pseudaletia unipuncta) - SOUTH DAKOTA - Damaged corn in grass fields in Union County; 90-acre field 4 miles southeast of Spink 85 percent damaged. Larvae ranged 3-4 per stalk in 160-acre cornfield 2 miles west of Elk Point, Union County. Damage first reported July 16. Lighter infestations occurred in corn near Beresford in northern part of county. Heaviest damage expected next 10-14 days. Damaged oats in field near Beresford; heads clipped. Damage curtailed by earlier than normal swathing in preparation for combining. (Kantack). MINNESOTA - Scattered infestations reported from many locations throughout State. Larvae range three-fourths to one and one-half inches in length, some pupae present. Feeding expected to continue 7 days. Infested area includes southeastern part of State into Red River Valley. Counties infested: Freeborn, Mower, Fillmore, Winona, Wabasha, Goodhue, Dakota, Scott, Carver, Sibley, Brown, Redwood, Renville, Wright, Stearns, Pine, Douglas, Clay, Norman, Polk, Clearwater. Infestations found in individual cornfields, reed canary grass, grass waterways, alfalfa, pastures, canning peas, and small grain. Populations can be extremely heavy and damaging at this time; generally, infested fields widely separated. Larvae very heavy in two Fillmore County cornfields, stemmed from grassy weed problems. Ranged 10-20 per square foot in weedy areas in one field and 9-13 on corn plants. Weed problem or nearby grassy area present in almost all cases of heavy populations. Small grains, except in Red River Valley, almost free of infestation. Averaged one larva per square foot in lodged areas of barley fields and throughout fields in Clay and Norman Counties. Light counts such as these do not pose problem but feeding will be noticeable. Grain still green should be watched. (Minn. Pest Rpt.).

WISCONSIN - Very heavy P. unipuncta populations in many localities caused special alert to be issued. Significant populations noted on 1,500 acres in Wood County, controls applied to about 1,000 acres in Barron County. Treatments also applied in Ozaukee, Washington, and Taylor Counties; corn, oats, and alfalfa infested. Up to 25+ per square foot noted in more severely infested fields in Barron County near Barron and Rice Lake cities. About 30 percent of larvae parasitized by Apanteles sp. (a braconid wasp) in southern counties. Despite heavy populations in individual fields and localized areas, general situation not serious. Surveys in corn, oats, and alfalfa show very light or trace populations in Grant, Lafayette, Iowa, Rock, Green, La Crosse, Trempealeau, Wood, Marathon, Dodge, Waushara, Fond du Lac, Winnebago, Columbia, and Dane Counties. Heavier counts found in cornfields with quackgrass and in lodged grain fields. No treatment needed in most cases. (Wis. Ins. Sur.).

IOWA - Damage by Pseudaletia unipuncta increased and widespread across State; feeding localized within affected cornfields. One 25-acre cornfield in Worth County about completely destroyed. Over half of leaves of one 15-acre Polk County cornfield destroyed. Some larvae parasitized. (DeWitt). ILLINOIS - Several reports of economic populations in corn. Damage severe enough for treatment in some west-southwest and east-southeast district fields. Averaged 6 larvae per 20 plants in one Christian County field. (Ill. Ins. Rpt.). MICHIGAN - Damaged oats and barley near Akron, Tuscola County. (Bell). Light in Barry County alfalfa. (Ruppel et al.).

MISSISSIPPI - P. unipuncta infested plants averaged 40 per 100 in 20-acre cornfield in Rankin County. (Robinson). CALIFORNIA - Larvae heavy in 100-acre Sudan grass seed-crop planting at Sacramento, Sacramento County; stripping stems. (Cal. Coop. Rpt.).

CORN EARWORM (Heliothis zea) - MARYLAND - Adults averaged 4 per week in Wicomico County light traps. Field infestations still noneconomic. Some oviposition underway in Somerset, Wicomico, and Worcester Counties. (U. Md., Ent. Dept.). VIRGINIA - Corn ears in Southampton, Nansemond, and Sussex Counties averaged 45 percent infested. Larvae mostly first, second, or third instar. (Allen). TENNESSEE - Immatures damaged forming corn ears at many locations in central areas, mainly in home gardens. At some locations where corn untreated, 100 percent of ears infested with 1-10 larvae per ear. (Gordon). ALABAMA - Very heavy larval populations developed in most Mobile County corn. Larvae in most every ear in some fields. (Vickery).

OKLAHOMA - H. zea larvae present in 100 percent of corn ears checked in Tillman County; ranged 2-9 per ear in sweet corn in Texas County. Moderate to heavy in home garden corn in Pawnee, Wagoner, Marshall Counties. Light in sorghum in Kay, Garfield, and Ottawa Counties. (Okla. Coop. Sur.). KANSAS - Eggs and larvae (up to third instar) heavy on corn checked in Stafford County; larvae fed on silks and ear tips. Very light on silking corn in Harvey, Sedgwick, and Pottawatomie Counties. Larval infestations in up to 50 percent of whorls found in sorghum in southeast district; infestations generally light, usually not more than 10-15 percent of whorls infested. (Bell).

NEW MEXICO - H. zea heavily damaged field of sorghum near Logan, Quay County; two of every five 24-inch plants severely damaged by third or fourth instar larvae. (N.M. Coop. Rpt.). IDAHO - Infested 100 percent of small experimental corn plants at Parma, Canyon County. Infestation about same as at this time in 1972. (Scott).

CORN LEAF APHID (Rhopalosiphum maidis) - NEW MEXICO - Light in whorls of sorghum near Bard, Quay County; ranged up to 700 per whorl near Logan. (N.M. Coop. Rpt.). OKLAHOMA - Heavy in few scattered sorghum fields in Osage and Texas Counties. Moderate in corn in Pawnee County. (Okla. Coop. Sur.). ARKANSAS - Declined, as expected, in sorghum in all areas. (Boyer). KANSAS - Heavy in whorls of sorghum in scattered southwest district fields; caused some reddening of leaves emerging from whorls. Some heavy infestations reported in some fields in Hamilton, Grant, and Stanton Counties. (Bell). MISSOURI - Easily found in most sorghum in southwest and west-central areas. Observed on 2-61 percent of plants in fields checked. (Munson). NEBRASKA - Continued to increase in

Clay County sorghum. Rhopalosiphum maidis ranged 0-15,000 per 10 plants, averaged 79.4 per plant, in 102 fields surveyed. Averaged 780 per plant in most heavily infested field. (Gary, Keith). WISCONSIN - Populations erratic and generally light; heavy in some older, well tasseled cornfields. Heavier in fields where tassels still unsheathed in one or two leaves. In fields where tassels fully exposed, only some plants with heavy populations. Probably due to heavier predator and parasite activity. (Wis. Ins. Sur.). ILLINOIS - Infestations in 10 west, central, and west-southwest district counties averaged 30 percent, ranged 0-90. Average per infested plant generally moderate, about 50+ in less than 10 percent of plants. Present conditions favorable for buildup of economically damaging populations due to current dry conditions in most aphid-infested areas. (Ill. Ins. Rpt.). INDIANA - Appears far below average in numbers and size of colonies on corn grown for grain throughout State. (Meyer).

OHIO - R. maidis very light, ranged 5-50 per tassel on infested field corn. Percent plant infestation by county: Warren 0-2, Brown 5, Highland 5-10, Scioto 8-10, Preble 40, Green 40-50, Ross 60, Clark 75, Adams 80. (Fox). MARYLAND - Populations still light on Eastern Shore. Ranged 50-250 per plant in about 10 percent of 300 acres of field corn. Infestations expected to remain non-economic throughout season. (U. Md., Ent. Dept.).

GREENBUG (Schizaphis graminum) - NEBRASKA - Increased slowly in Clay County sorghum. Averaged 18.4 per plant in 102 fields examined July 13-16; in one field 162.5 per plant noted. No economic infestations seen. Up to 3,000 per plant observed in one Clay County field July 17, but no plants showed economic damage. (Gary et al.). Distribution spotty in Lincoln County sorghum where less than 10 percent of local fields infested. (Campbell). MISSOURI - Light in most sorghum checked in southwest area. Small colonies on up to 31 percent of plants in one isolated area. No economic infestations observed. (Munson).

KANSAS - Although S. graminum light in most southwest district sorghum, populations generally increased rapidly; economic or near economic in some fields. In 186 fields in Haskell and Stevens Counties, averaged about 90 per plant overall this period, about 5-fold increase over previous period; maximum infestations in these counties averaged about 1,900 per plant. Little treatment reported in area. Infestations generally light in eastern districts; no problems reported. Sorghum checked on weekly basis in Riley, Pottawatomie, and Wabaunsee Counties showed 3-fold to 10-fold increases between July 12 and July 19; this is substantial increase. Populations ranged 30-750 per plant July 19. No significant parasitism by Lysiphlebus testaceipes (a braconid wasp) reported. (Bell). OKLAHOMA - Increased slowly on sorghum in panhandle counties. Ranged up to 200 per plant in Cimarron County, up to 150 in Texas County, up to 40 in Beaver County. Moderate in Garfield County, light in Jackson County. (Okla. Coop. Sur.). NEW MEXICO - Very light (25-200 per leaf) on lower leaves of sorghum near Bard, Quay County, and near Clayton, Union County. Ranged up to 1,000 per leaf in Harding County. (N.M. Coop. Rpt.).

POTATO LEAFHOPPER (Empoasca fabae) - MARYLAND - Ranged 30-80 per 10 sweeps in central area second-growth alfalfa. Nymphs and adults well below economic levels, range 0-8 per 10 sweeps, in third-growth alfalfa. Yellowing evident in maturing second growth; crop

to be cut in 8 days. About 20 percent of central area second-growth alfalfa still to be cut. (U. Md., Ent. Dept.). INDIANA - Empoasca fabae adults and nymphs still heavy on alfalfa throughout most of State. Treatments needed. Heavy on alfalfa, snap beans, and peppers; averaged 2 per leaf in soybeans. (Huber et al.). WISCONSIN - Ranged from 5 per 10 sweeps to 25 per sweep. Heavier populations noted in alfalfa in sandy soil areas. (Wis. Ins. Sur.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - WISCONSIN - Unusually heavy in several alfalfa fields in western Dane and northern Iowa Counties. Ranged 200-300 per sweep; fields wilting and in one instance yellowing. Alates comprised 25 percent of population, some parasitism evident. Counts in other areas considerably lighter. Ranged from 10 per sweep in La Crosse County area to 4 per sweep in northern Rock County and 15 per sweep in more sandy soiled fields in southern Rock County. (Wis. Ins. Sur.). KANSAS - Very light in some experimental plots of 8-inch alfalfa in Stafford County; first of season. None seen in other south-central district fields checked. (Bell). FLORIDA - Adults and nymphs light on alfalfa at Gainesville, Alachua County. (Fla. Coop. Sur.).

TOBACCO BUDWORM (Heliothis virescens) - TENNESSEE - Larvae found on tobacco in eastern area. Controls applied to date ineffective in this field. (Mullett).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - First-generation moths flying in northeast district as far north as Brown County. First-generation infestation heavy in spots in Gray County cornfield; late-instar larvae and pupae present. Damaging infestations expected to be more prevalent in western area than in 1972. (Bell). NEBRASKA - Light in Clay County corn; about 4 percent of plants infested in 122 fields surveyed. (Gary). WISCONSIN - Second adult flight began at advanced site in Dane County. Peak expected near August 4. Larvae heavy in few individual fields; substantial reservoir of potential breeding stock can create severe problems in later sweet corn if weather remains favorable. (Wis. Ins. Sur.).

ILLINOIS - First-generation O. nubilalis pupation 32 percent in Adams and Pike Counties and $\frac{8}{8}$ percent in Ogle County. Second-generation moth emergence about underway throughout most of State. (Ill. Ins. Rpt.). OHIO - Second-generation adults emerged July 17 in Wayne County, about 4 days earlier than expected. Sharp emergence increase noted July 19. (Rings). MARYLAND - First-generation pupation continued in central area. First-generation adults began emerging in Baltimore, Frederick, and Montgomery Counties. First, second, and some third-instar second-generation larvae active in Eastern Shore field corn. Still light to moderate, ranged 10-30 per 100 plants. (U. Md., Ent. Dept.). DELAWARE - Adults continued to increase in blacklight traps in Sussex County; ranged to 100+ per night in some areas. Fresh egg masses present on corn and peppers. (Burbutis, Davis). NEW HAMPSHIRE - Severe on unsprayed sweet corn at Stratham, Rockingham County. (Bowman).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - MISSOURI - First adult emergence of season observed in southeast area July 14. Pupation averaged 65 percent. (Houser).

FALL ARMYWORM (Spodoptera frugiperda) - MARYLAND - First larvae of season damaged several late planted silage cornfields in Frederick and Carroll Counties. Damaged plants ranged 1-2 percent in most fields. Infestations in late corn expected to increase rapidly next 14 days in central area. (U. Md., Ent. Dept.). MISSOURI - Larvae light to moderate in whorls in late-planted corn and grain sorghum in southwest and west-central areas. Damage observed on 3-65 percent of plants in fields checked. (Munson). OKLAHOMA - Heavy in sorghum in Pawnee County; averaged 7 per 100 terminals in Jackson County. (Okla. Coop. Sur.). ALABAMA - Mixed larval populations of this species and S. ornithogalli (yellowstriped armyworm) very heavy, 2-6 per plant, damaged young corn in small Lee County planting. (Hagler et al.).

CORN ROOTWORMS (Diabrotica spp.) - D. virgifera (western corn rootworm) adults averaged up to 4 per corn plant in southwest district; larvae destroyed up to 30 percent of roots (few large larvae still present). Adults, mostly D. undecimpunctata howardi (southern corn rootworm) ranged 1-2 per plant in early tassel to full-silk corn in south-central district. D. undecimpunctata howardi and D. virgifera adults, in about equal numbers, averaged 4 per silking corn plant in Pottawatomie County. (Bell). ILLINOIS - D. longicornis (northern corn rootworm) and D. virgifera adult emergence very common. A Henderson County field averaged 6 larvae and pupae per plant. Pupation about 50 percent. (Ill. Ins. Rpt.).

WISCONSIN - Emergence of D. virgifera and D. longicornis began. Adults noted in Dane, Columbia, Rock, and La Crosse Counties. Averaged one per 10 corn plants in Rock County field. Up to 3 per stalk noted. Very light in Rock and La Crosse Counties. (Wis. Ins. Sur.). NEW JERSEY - First D. longicornis adults noted in corn in Warren County July 13, Hunterdon County July 18. Larvae noted feeding on roots in untreated row of test blocks at Stewartsville and Asbury July 13. (Ins.-Dis. Newsltr.).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - INDIANA - Severely damaged corn grown for grain in treated Porter County field. (Turpin). MICHIGAN - Heavy in cornfield near Buchanan, Berrien County. Adults severely clipped silk, treatment needed to protect seed set. (Musgrove). SOUTH DAKOTA - Adults emerged and fed on corn leaves in southern Union County and near Hot Springs, Fall River County. In untreated cornfield near Elk Point, Union County, adults ranged 2-3 per plant, with 4 adults on some plants. Larvae still damaged roots. Adults ranged 2-3 per 10 plants in cornfield near Oral, Fall River County. (Jones). MISSOURI - Surveys in irrigated corn in southwest area showed very little lodging due to larvae. Adult emergence completed in all fields checked. Adult counts averaged as high as 5.5 per plant in some fields and as low as 1.3 per plant in one field. (Munson). COLORADO - Adults emerged in Weld County; fed on leaves of corn as silks not available. (Hantsbarger).

SORGHUM MIDGE (Contarinia sorghicola) - ARKANSAS - Found in only one area surveyed this period. Very light, about one midge per 20-25 heads in blooming sorghum on university farm in Washington County. Survey negative in blooming sorghum in Conway, Franklin,

Johnson, and Pope Counties. Earliest sorghum in State through blooming and beyond infestation. With sorghum planted on staggered basis over long period, late sorghum will likely be more subject to midge damage this year than the crop, in general, was past two years. (Boyer).

SMALL GRAINS

SAY STINK BUG (Chlorochroa sayi) - UTAH - Flights into Washington, Juab, and Iron County areas heavier than for several years. Damage to grain crops and alfalfa seed crops anticipated. (Knowlton).

GRASS THRIPS (Anaphothrips obscurus) - MONTANA - Adults averaged 3 per stem on 700 acres of barley in early milk stage in Chouteau County. (Pratt).

TURF, PASTURES, RANGELAND

CALIFORNIA TORTOISESHELL (Nymphalis californica) - NEVADA - Larvae caused heavy defoliation of ceanothus on 1,000+ acres in Galena Creek area, Washoe County. (Lauderdale).

SAGEBRUSH DEFOLIATOR (Aroga websteri) - NEVADA - Heavily damaged sagebrush south of Ely, White Pine County. (Lauderdale).

COULEE CRICKET (Peranabrus scabricollis) - IDAHO - Damage to 10 acres of Clearwater County agricultural lands along pine forested area indicated need for control. (Fitzsimmons).

BLUEGRASS BILLBUG (Sphenophorus parvulus) - IDAHO - Heavy in many lawns in Canyon and Payette Counties. (Homan).

FORAGE LEGUMES

PEA APHID (Acyrtosiphon pisum) - WASHINGTON - Ranged up to 1,000+ per sweep in several alfalfa seed fields east of Othello, Adams County. Outbreak conditions in area apparently same as occurred 1-2 weeks ago in Yakima Valley and lower Columbia Basin area. (Johansen). IDAHO - Populations in alfalfa seed fields heaviest in several years in southwest area; averaged about one-quarter cup per sweep. (Waters). Ranged 100-2,000 per sweep in untreated alfalfa in Canyon, Owyhee, and Payette Counties. Predators very light. (Homan). UTAH - Ranged 25-100 per 10 sweeps of alfalfa in Willard area of Box Elder County, 50-150 at Cove, Cache County. (Knowlton, Roberts).

WISCONSIN - A. pisum decreased sharply in alfalfa. Populations rarely exceed 5-10 per sweep in fields sampled from La Crosse to Winnebago to Grant and Rock Counties. (Wis. Ins. Sur.). MARYLAND - Ranged 600-2,000 per 10 sweeps in central area second-growth alfalfa. Second growth should be cut within next 7 days. Third growth still clean. (U. Md., Ent. Dept.). FLORIDA - Nymphs and adults ranged 500-600 per 100 sweeps of blooming alfalfa at Gainesville, Alachua County. (Fla. Coop. Sur.).

LYGUS BUGS (Lygus spp.) - NEW MEXICO - Nymphs too numerous to count. Alfalfa exhibited moderate damage in Quay and Colfax Counties. (N.M. Coop. Rpt.). ARIZONA - Adults averaged 100 per 100 sweeps of alfalfa at Casa Grande, Pinal County. (Ariz. Coop. Sur.). NEVADA - Fourth and fifth-instar nymphs averaged 50 per

sweep on alfalfa hay at Fallon, Churchill County. (Arnett).
IDAHO - Lygus elisus and L. hesperus ranged 2-25 per sweep in some alfalfa seed fields in Canyon County. (Waters).

ALFALFA WEEVIL (Hypera postica) - WASHINGTON - Adults ranged up to 10 per sweep in alfalfa seed fields at Touchet, Walla Walla County. (Burnham, Johansen). NEW MEXICO - Counts in alfalfa ranged 12-15 adults and 0-10 larvae per 25 sweeps in Cimarron Valley, Colfax County, and 6-10 adults and 25-30 larvae at Espanola, Rio Arriba County. (N.M. Coop. Rpt.). SOUTH DAKOTA - Light, 30-40 first to third instar-larvae and 10-15 adults per 100 sweeps, in second-crop alfalfa near Spearfish, Lawrence County. (Jones). WISCONSIN - Ranged from 3 per 10 sweeps to 6 per sweep in Sauk County area. Adults common in more dense alfalfa stands. (Wis. Ins. Sur.).

WESTERN YELLOWSTRIPED ARMYWORM (Spodoptera praefica) - NEVADA - All larval instars ranged 30-40 per sweep on 800+ acres of alfalfa hay in Fallon area, Churchill County. Plants showing grayish cast. (Arnett). Larger larvae ranged 8-10 per sweep on alfalfa hay and seed in Denio and Quinn River Crossing areas, Humboldt County. (Barclay, Rowe). Averaged 2 per sweep in alfalfa hay fields checked at Lovelock, Pershing County. (Arnett).

GREEN CLOVERWORM (Plathypena scabra) - WISCONSIN - Moderate, 15 per 10 sweeps, in some alfalfa fields in southwestern area. Adults heavier than normal in Lancaster blacklight trap. Larvae present in potatoes in Portage County. (Wis. Ins. Sur.).

GARDEN WEBWORM (Loxostege rantis) - ARKANSAS - Economic in alfalfa in at least 2 areas of State. Ranged 300-400 per 100 sweeps in Franklin County field. About 50 percent of foliage damaged. Controls probably applied by July 20. Larvae lighter in fields on university farm at Fayetteville, where controls applied. Franklin County field in drought area. (Boyer).

ALFALFA LEAF BLOTCH-MINER (Agromyza frontella) - NEW JERSEY - Very few adults collected by sweeping alfalfa ready for second cutting in Warren, Sussex, and Hutterdon Counties. Blotch mines easily found, but not considered economic in any fields inspected. Expected to increase sharply during late July and August; could damage third cutting. (Ins-Dis. Newsltr). NEW HAMPSHIRE - Second brood active in regrowth alfalfa. This brood could cause most economic loss to crop; controls recommended. (Bowman).

GRASSHOPPERS - OHIO - Growth and maturation in forage crops increased due to recent warm, dry weather. Heaviest counts found in alfalfa 1.6 per sweep in Butler County and 1 per sweep in Warren County. Noneconomic to date. (Fox). WISCONSIN - Nymphal growth of Melanopus femurrubrum (redlegged grasshopper) still delayed. First instars most common; second and third instars dominant stages. Ranged 1-3 per sweep in La Crosse County and up to 15 per sweep in Brodhead area. Some nymphs present in most regrowth alfalfa, heaviest counts still found in roadside grasses. Estimated close to 100 per square foot in Brodhead area. (Wis. Ins. Sur.).

SOYBEANS

YELLOWSTRIPPED ARMYWORM (Spodoptera ornithogalli) - MISSISSIPPI - Infestations of this and another cutworm still threat to soybeans in many Delta counties. Plants less than 6-inches tall most heavily infested. Still light to heavy in 4,000 acres in Issaquena County. (Robinson).

BLACK CUTWORM (Agrotis ipsilon) - MISSISSIPPI - Destroyed stand in 5-acre section of large Adams County field. (Robinson).

GREEN CLOVERWORM (Plathypena scabra) - INDIANA - Larvae ranged 4-15 per linear foot in soybeans in bloom to full-bloom stage in Warrick County field. Reported on soybeans in Parke and Tippecanoe Counties. (Edwards).

PAINTED LADY (Cynthia cardui) - WISCONSIN - Larvae still present in soybeans. Prevalence of smaller larvae and absence of larvae from "nests" indicate start of another generation. Adults often noted along roadsides. No economic damage found in southern part of State. (Wis. Ins. Sur.).

COTTON

BOLLWORMS (Heliothis spp.) - GEORGIA - Eggs ranged 0-35 and larvae 0-8 per 100 terminals in southern area. (Womack). ALABAMA - Moth flights light in central and northern areas; eggs and larvae also light. Very heavy larval population developed in extreme southern area in Houston County; 5 control applications gave very poor results. (McQueen). MISSISSIPPI - Second-generation eggs appeared on cotton; ranged 2-8 percent over State. Ranged up to 21 percent in Rankin County. Moth flights increased. (Robinson).

OKLAHOMA - In Jackson, Harmon, Greer, Kiowa, and Tillman Counties, H. zea (bollworm) larvae ranged up to 28 per 100 terminals in fields treated late for fleahoppers and 0-10 per 100 terminals in untreated fields. Egg counts in Jackson County ranged 10-20 per 100 terminals. Eggs and small larvae light in Wagoner County and in most fields in Caddo County. (Okla. Coop. Sur.). ARKANSAS - Number of H. zea and H. virescens (tobacco budworm) moths taken in light traps and observed on sugar lines declined from last period. July moth flight did not occur at usual time as in past. Larval infestations usually rather heavy at this time of year as result of heavy moth flights earlier in July. (Boyer).

BOLL WEEVIL (Anthonomus grandis) - OKLAHOMA - Damaged squares averaged one percent in Caddo County. Light in Cotton and Wagoner Counties. (Okla. Coop. Sur.). ARKANSAS - Relatively light over State for time of year; partly due to lateness of crop. May also be result of large numbers of weevils emerging from hibernation and dying before cotton began to square. (Boyer). MISSISSIPPI - Second-generation weevils began to emerge in Rankin County. Survey of squares in Noxubee County indicates emergence to begin July 20-21. (Robinson).

ALABAMA - A. grandis ranged light to heavy in central and southern areas depending on control efforts. Most growers made 2-5 applications on all older fields with good results. Continued light in most older fields in Tennessee River Valley; "hatchout" of first-generation underway. Little if any controls applied. Heavier in mountain area cotton in parts of 5 counties where weevils overwintered better in northern part of State. (McQueen).

GEORGIA - Anthonomus grandis punctured squares increased with emergence and feeding of young weevils in southern area. (Womack). TENNESSEE - Punctured squares averaged 9 percent in southern counties. First-generation adults due to emerge within next 7-10 days. Conditions ideal for further increase. Punctured squares 18 percent in one Fayette County field. (Locke).

TARNISHED PLANT BUG (Lygus lineolaris) - ALABAMA - Adults and nymphs ranged 40-130 per 100 stalks in much of Tennessee River Valley cotton over about 80,000 to 100,000 acres; loss of squares ranged 80-95 percent. Controls applied in more heavily infested areas. (Eich et al.). OKLAHOMA - Counts per 100 terminals ranged 6-20 in Wagoner County and 15-25 in Bryan County. Light in Cotton County. (Okla. Coop. Sur.).

COTTON FLEAHOPPER (Pseudatomoscelis seriatus) - OKLAHOMA - Ranged up to 52 per 100 terminals in Caddo and Washita Counties, 0-43 in Jackson, Greer, Harmon, Kiowa, and Tillman Counties. Heavy in Cotton County. Ranged 30-35 per 100 terminals in few fields in Bryan County, 20-25 in Wagoner County. (Okla. Coop. Sur.).

POTATOES, TOMATOES, PEPPERS

EUROPEAN CORN BORER (Ostrinia nubilalis) - VIRGINIA - Flight of second-brood adults peaked and tapered off in Accomack and Northampton Counties. Based on relatively high degree of infestation in potatoes, collections much lower than expected. Heaviest single catch 41 on July 4. Recent collections averaged less than 10 per night. These levels can cause economic damage. Due to staggered emergence, growers should keep 5-day schedule on critical crops such as peppers. (Hofmaster). OHIO - Adult emergence and oviposition increased. Treatment should be applied to peppers as soon as possible before larval hatch. (Rings).

WESTERN YELLOWSTRIPED ARMYWORM (Spodoptera praefica) - OREGON - Sporadic, local, heavy infestations damaged potato plantings in lower Klamath Basin in Merrill area of Klamath County. Larvae about one inch in length. Treatments for Myzus persicae (green peach aphid) giving good control of S. praefica. Post-treatment checks show heavy populations in some fields; dead larvae ranged 20-40 per linear foot of furrow. (Penrose).

CABBAGE LOOPER (Trichoplusia ni) - MONTANA - Larval feeding damaged leaves on 240 acres of potatoes near Ronan, Lake County; counts not economic throughout field. (Pratt).

GREEN PEACH APHID (Myzus persicae) - OREGON - Alates moved into Malheur County potato fields, some growers applying treatments. Treatments also underway in Klamath County. (Burr, Humphrey). MICHIGAN - This species and Macrosiphum euphorbiae (potato aphid) found in every potato field in Presque Isle and Emmet Counties. Heaviest in fields not treated with soil systemic at planting time. (Sauer). DELAWARE - M. persicae averaged about 2 per leaf on untreated peppers in Sussex County. (Burbutis, Davis).

BEANS AND PEAS

PEA APHID (Acyrtosiphon pisum) - WISCONSIN - Ranged 5-15 per sweep in peas in Trempealeau, Columbia, Dane, Dodge, Fond du Lac, and Winnebago Counties. Up to 160 per sweep noted in older peas in Fox Lake and Ripon areas. Peas about 7 days from harvest. (Wis. Ins. Sur.).

BEAN APHID (Aphis fabae) - IDAHO - Heavy on several hundred acres of lima, garden, and field beans in Canyon County July 11. (Homan).

COLE CROPS

CABBAGE LOOPER (Trichoplusia ni) - ILLINOIS - Caused much damage to commercial crops and home gardens throughout State. Damaged cabbage, broccoli, tomatoes, beans, and peas. Larvae active for past 10 days, about 30 days earlier than normal. (Ill. Ins. Rpt.).

DETECTION

New State Record - WOOLLY ALDER APHID (Prociphilus tessellatus) - OKLAHOMA - Choctaw County. (p. 490).

New County Records - AN APHID (Hamamelistes spinosus) SOUTH CAROLINA - Greenville (p. 490). ASIATIC OAK WEEVIL (Cyrtepidomus castaneus) WEST VIRGINIA - Roane (p. 490). FACE FLY (Musca autumnalis) TENNESSEE - Giles. VIRGINIA - Goochland. OKLAHOMA - Rogers, Delaware (p. 491). HOLLYHOCK WEEVIL (Apion longirostre) NEW JERSEY - Essex (p. 489). SADDLED PROMINENT (Heterocampa guttivitta) WEST VIRGINIA - Kanawha (p. 490).

CORRECTIONS

CEIR 23(28):444 - TOBACCO - GREEN PEACH APHID (Myzus persicae) - ... should read TOBACCO BUDWORM (Heliothis virescens) - ...

CEIR 23(28):446 - SADDLED PROMINENT (Heterocampa guttivitta) should read (Heterocampa guttivitta).

CEIR 23(28):447 - LOCUST LEAFMINER (Xenochalepus dorsalis) - WEST VIRGINIA - Delete first sentence for Randolph County. This is an incorrect report. (Miller).

DECIDUOUS FRUITS AND NUTS

CODLING MOTH (Laspeyresia pomonella) - SOUTH CAROLINA - Light infestation of this species and Grapholitha molesta (oriental fruit moth) caused some damage to apples in a Pickens County orchard. (Pollet).

APPLE MAGGOT (Rhagoletis pomonella) - MAINE - Emergence slow, very small numbers emerged erratically. Peak, usually about July 20, expected 7-10 days later. (Gall).

EUROPEAN RED MITE (Panonychus ulmi) - OHIO - Continued to increase in unsprayed apple orchards. Averaged 30 per leaf on Stayman and 38 per leaf on Red Delicious cultivars in Fairfield County. Noneconomic on Rome, Johnathan, and Golden Delicious cultivars. (Holdsworth). Up to 20 per leaf on 25 leaves from 4 untreated Cortland trees in Wayne County. On 50 leaves from two Golden Delicious trees, miles averaged 7.6 per leaf. Orchards treated in April averaged one per leaf on Red Delicious. (Gregory, Harr).

FALL WEBWORM (Hyphantria cunea) - SOUTH CAROLINA - Light larval infestation caused some damage to pecan trees in Chesterfield County. (Pruitt). OKLAHOMA - Moderate to heavy on pecan and other trees over most of southeastern two-thirds of State. Some areas report as many as 10 webs per tree. (Okla. Coop. Sur.).

WALNUT CATERPILLAR (Datana integerrima) - OKLAHOMA - Moderate to heavy on pecan and walnut trees in many counties in eastern half of State; 3-4 colonies per tree reported in Lincoln County. (Okla. Coop. Sur.).

ORNAMENTALS

HOLLYHOCK WEEVIL (Apion longirostre) - NEW JERSEY - Adults collected from hollyhock in home flower garden at West Caldwell, Essex County, June 20, 1973, by J. Kupcho. Determined by R.E. Warner. This is a new county record. (PPQ).

BAGWORM (Thyridopteryx ephemeraeformis) - PENNSYLVANIA - Larvae present on junipers and other hosts in Harrisburg area, Dauphin County. Defoliation apparent, request for controls numerous. (Simons).

AZALEA LACE BUG (Stephanitis pyrioides) - SOUTH CAROLINA - Extremely heavy infestation present on 150 three or four-year-old azalea plants in Lexington County nursery. Plants severely damaged. (McCaskill).

FOREST AND SHADE TREES

SPRUCE BUDWORM (Choristoneura fumiferana) - MAINE - Feeding damage and moth activity present in all areas from Ft. Kent, Aroostook County, to Kittery, York County. Emergence, except for parasitized larvae, about complete and oviposition began. Egg masses evident on undersides of fir needles. Moderate to severe defoliation noticeable over much of spruce and fir region of State except in southeastern area. Defoliation of spruce and fir appears most extensive since outbreak of 1910-1918. (Gall).

DOUGLAS FIR TUSSOCK MOTH (Hemerocampa pseudotsugata) - NEW MEXICO - Larvae on Douglas-fir continued to increase in range and numbers at Los Alamos, Los Alamos County. Heavy populations observed in Santa Fe, Santa Fe County. In Tesuque, Santa Fe County, many areas of fir severely damaged. (N.M. Coop. Rpt.).

BLACK PINELEAF SCALE (Nuculaspis californica) - CALIFORNIA - Infested sugar pine over large area of Shasta-Trinity National Forest; several thousand trees affected. This is continuing infestation. (USFS).

SADDLED PROMINENT (Heterocampa guttivitta) - WEST VIRGINIA - Larvae caused 25 percent defoliation to 4 flowering crab apple trees in Kanawha County. Collected by W.F. Mairs. Determined by J.D. Hacker. This is a new county record. (Hacker).

ASIATIC OAK WEEVIL (Cyrtepidomus castaneus) - WEST VIRGINIA - Adults taken from black oak at Harmony area, Roane County. Collected and determined by J.M. Atkins. This is a new county record. (Hacker).

LOCUST LEAFMINER (Xenochalepus dorsalis) - WEST VIRGINIA - Larvae infested 50 percent of foliage of all black locust trees in Jefferson and Berkeley Counties. (Cole). VIRGINIA - Heavy infestations occurred in mountain counties. Infestations of 95 percent of foliage common (80 percent of stand) in Roanoke, Botetourt, and Rockbridge Counties. Adults emerged July 17. Infestations much lighter in Piedmont and Coastal Plains area. (Allen). KENTUCKY - Caused 30 percent defoliation of locust trees in Robertson and Nicholas Counties. (Barnett).

WOOLLY ALDER APHID (Prociphilus tessellatus) - OKLAHOMA - Collected from maple in Hugo, Choctaw County, May 8, 1972, by A.A. Sewell. Determined by L.M. Russell. This is a new State record. (Okla. Coop. Sur.).

AN APHID (Hamamelistes spinosus) - SOUTH CAROLINA - Collected in Pickens County May 29, 1973, by D.K. Pollet. Determined by L.M. Russell. Also collected by Pollet on beech in Geenville County June 20 for a new county record. (McCaskill).

MAN AND ANIMALS

SCREWWORM (Cochliomyia hominivorax) - Total of 369 confirmed cases reported in continental U.S. during period July 8-14 as follows: Texas 83, New Mexico 49, Arizona 231, California 6. This brought the cumulative yearly total to 2,358 confirmed cases. the third worst year since the program began in 1962. More than 65 percent of 1973 cases may be attributed to the outbreak in Arizona. The 231 cases reported in that State this period is the largest weekly figure to date in 1973. A total of 1,041 confirmed cases reported in Mexico. Number of sterile flies released in U.S. this period totaled 125,523,600 as follows: Texas 83,778,000; New Mexico 5,893,200; Arizona 34,313,400; California 1,539,000. Total of 63,199,800 sterile flies released in Mexico. (Anim. Health).

FACE FLY (Musca autumnalis) - VERMONT - Annoying in most areas. Some pinkeye reported in Chittenden County. (Nielsen, MacCollom). MARYLAND - Adults ranged 5-40 per head on dairy cattle, 30-40 per head on horses, and 20-60 per head on beef steers in Harford, Baltimore, Carroll, and Frederick Counties. Species difficult to control in State. (U. Md., Ent. Dept.). VIRGINIA - Adults ranged 3-14 per horse at single Goochland County farm. This is a new county record. (Allen). ALABAMA - This species, Haematobia irritans (horn fly), and unspecified gnats very heavy around cattle in Limestone, Lauderdale, Etowah, Randolph, and other counties. Pinkeye very heavy in these counties. Much rain in area this season. (Patterson et al.).

MISSISSIPPI - M. autumnalis averaged 20 per face on cattle in Monroe and Chickasaw Counties. (Robinson). TENNESSEE - Ranged 25-50 per head on previously treated Giles County herd. (Watson). Caused problems in Monroe County. Ranged 25-50 per head on several herds. Treatments applied. Collected and determined by R.L. Sliger. This is a new county record. (Gordon, Bruer). KENTUCKY - Averaged 12.3 per animal in Robertson County and 8.7 per animal in Harrison. Several cases of pinkeye observed. (Barnett). OHIO - Heavy in southwestern area, caused extreme annoyance to beef and dairy cattle. Counts varied, usually exceeded 35 per face. (Fox). INDIANA - Averaged 10.1 per bull (range 0-30) and 5.7 per steer (range 0-25) on 5 bulls and 9 steers in Tippecanoe County. (Christensen). WISCONSIN - This species and Haematobia irritans (horn fly) still light to moderate on cattle in all areas. (Wis. Ins. Sur.).

MISSOURI - M. autumnalis averaged 25 per head on 2 cattle herds in northwest area. (Brown). IOWA - Adults still heavy on untreated beef herds. Averaged 22 per head on Mahaska and Story County herds. (DeWitt). NEBRASKA - Averaged 25 per face on range cows and calves past 14 days in Dawson, Keith, and Lincoln Counties. (Campbell). OKLAHOMA - Ranged 8-30 per face on cattle checked in Rogers County. Specimens collected in Delaware County. These are new county records. (Okla. Coop. Sur.). UTAH - Heavy near cattle and horses in Collinston and Fielding area of Box Elder County, Ogden area of Weber County, and farms in Davis County. (Knowlton).

HORN FLY (Haematobia irritans) - MARYLAND - Adults heavy in southern area and on Eastern Shore. Ranged 20-80 per head. Expected to increase where controls not used. Under control in most dairy herds. (U. Md., Ent. Dept.). MISSISSIPPI - Averaged 200+ on cattle in Oktibbeha, Monroe, and Clay Counties. (Robinson). TENNESSEE - Ranged 50-200 per head on beef cattle treated with backrubbers in Giles County. (Watson). Ranged 0-50 per head on Henderson County herd. (Turpen). OHIO - Light on beef and dairy cattle in southwestern area. Ranged 40-150+ per one side of back. Exceeded 350 per side of back in area during same period in 1972. (Fox). IOWA - Adults increased on untreated beef herds in central area. Adults ranged 50-400 (average 185) on Story County herds and 100-200 (average 133) on Mahaska County herds. (DeWitt).

NEBRASKA - H. irritans ranged 400-500 per head on untreated range cattle in Dawson, Keith, and Lincoln Counties. (Campbell). OKLAHOMA - Averaged 300 per head on cattle in Payne County. Heavy in Pontotoc County, moderate on Osage, Pawnee, Craig, Lincoln, Comanche, Bryan, and Atoka Counties. (Okla. Coop. Sur.). UTAH - Very heavy on unsprayed beef herds in Millard County. (Chapman).

STABLE FLY (Stomoxys calcitrans) - VIRGINIA - Adults, 3-5 per horse, noted at Goochland County stable. Continued feeding by adults caused scabs and open wounds on external base of dog's ear. About 150 adults noted on nearby building. (Allen). WISCONSIN - Increased, caused severe annoyance to cattle in parts of Wood, Marathon, and Waushara Counties. Annoying to man in many areas. (Wis. Ins. Sur.). NEBRASKA - Ranged 10-12 per animal in untreated feedlots in Dawson, Keith, Lancaster, Lincoln, and Saunders Counties. Ranged 1-2 per head in treated feedlots. Counts appear to be declining probably due to drying out of feedlots past few weeks. (Campbell).

TABANID FLIES - ARKANSAS - Single specimen of Goniops chrysocoma collected on oak leaf in Carroll County. This is rare species and specimen represents only record in State since early 1930's. According to literature, species broods its eggs and female apparently does not feed on livestock as do most Tabanidae. (Boyer). WISCONSIN - Deer flies unusually heavy in all areas of State. Generally more of problem in woodlands and near water. Considerable annoyance to humans and animals occurred some distance from water or woodlands. Biting severe in some areas. Horse flies heavy, caused considerable annoyance to humans in most of State. Reported as major nuisance by vacationers in some northern county areas. (Wis. Ins. Sur.). Tabanus spp. moderate on cattle in Craig County. T. giganteus ranged 6-20 per head on herd of heifers in Rogers County. (Okla. Coop. Sur.).

MOSQUITOES - MARYLAND - Light traps and landing collections show sharp increase of Aedes sollicitans in Worcester County since July 5, 1973. Populations in counties bordering Chesapeake Bay still normal. (State Dept. Agr.). OHIO - Bite collection in Henry County consisted of Aedes spp. (152), A. vexans (284), A. sticticus (60), A. trivittatus (19), and A. stimulans (460). (Ohio Dept. Health, Encephalitis Unit). ARKANSAS - Adults in light traps averaged about 200 per trap per night. Primarily Psorophora confinnis with some Anopheles quadrimaculatus. (Boyer). MINNESOTA - Mansonia perturbans most important species in light traps and evening bite collections in Metropolitan Mosquito Control District. Daytime field bite collections included Aedes vexans, A. stimulans, A. excrucians, A. trivittatus, A. cinereus, A. fitchii, and M. perturbans. (Minn. Pest Rpt.).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Moderate on untreated cattle in Marshall County. Larvae heavy on cattle in Latimer County. (Okla. Coop. Sur.).

BENEFICIAL INSECTS

LADY BEETLES - ARKANSAS - Coleomegilla maculata adults still present but numbers declined in sorghum in bloom and postbloom stages. Reproduction ceased in these fields; no eggs or larvae present. Beetles probably moving to greener crops. (Boyer). IDAHO - Larvae of several species ranged up to 10 per sweep in some alfalfa seed fields in Canyon County. (Waters).

A CHALCID WASP (Brachymeria intermedia) - WEST VIRGINIA - Adults (1,000) released in Dolly Sods area of Grant County for control of Alsophila pometaria (fall cankerworm). (Coffman).

A PTEROMALID WASP (Dibrachys cavus) - OHIO - Emerged from Synanthedon pictipes (lesser peach tree borer) pupae in Wayne County. Determined by B.D. Burks. This is a gregarious endoparasite. (Purrington).

PAINTED LADY (Cynthia cardui) - MINNESOTA - Newly emerged adults becoming heavy in Traverse County northward into Clay County. Most larvae pupated. (Minn. Pest. Rpt.).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

GRASSHOPPERS - MINNESOTA - Ranged 18-22 per square yard along some roadsides in Wilkin and Clay Counties. Mainly first and second instar Melanopus femurrubrum, some M. bivittatus present. Similar populations noted along State Route 25 in Sibley County. Very little movement into nearby cropland noted. Populations light elsewhere in State. (Minn. Pest Rpt.). NORTH DAKOTA - Ranged up to 30 (average 10) per square yard in field margins and roadsides in Kidder County. Field counts per square yard up to 10 in small grain fields and 25 in alfalfa. Ranged up to 8 (average 2) per square yard in pastures. M. bivittatus, M. sanguinipes, M. packardii and M. femurrubrum dominant. Development ranged second instar through adult. (Grasser).

SOUTH DAKOTA - Grasshoppers heavy in parts of Campbell, Walworth, and Potter Counties; ranged up to 40 per square yard. Melanoplus bivittatus, M. differentialis, M. sanguinipes, and M. femurrubrum present; ranged second instar to adult. Grasshoppers damaged small grains, alfalfa, and other crops in southeastern Lyman and northern Gregory Counties; M. bivittatus main species, ranged up to 15 per square yard in infested alfalfa. Other cropland and some grassland also infested. Grasshoppers ranged 10-15 per square yard along roadsides, fencelines, field margins, and in alfalfa in southeastern Brown and northeastern Spink County. M. bivittatus main species; ranged third instar to adult. (Johnson). Grasshoppers heavy in northern Davison County; increased in Bennett County. (Kantack).

NEBRASKA - Melanoplus spp. averaged 10 per square yard in field margins, ditches, and irrigation canals in Keith County. Some damage to cornfield borders as grasshoppers left margins and entered nearby fields. (Campbell). UTAH - Moderately damaged grain crops in Park Valley, Box Elder County. (Roberts, James). Moved from range into croplands in many parts of Millard County, most serious at McCormick. (Chapman). Infestations on rangelands more frequent than during 1972. In some areas, range species moved to nearby alfalfa and grains. (Knowlton).

MONTANA - Grasshoppers averaged 10 per square yard on 10,000+ acres of dry land in Big Hole area of Beaverhead County; mostly fourth instar, few adults. Averaged 10 per square yard in same area on 2,000 acres of irrigated grass hay. In Blaine County, Melanoplus spp. caused apparent damage 20-50 feet within borders of 1,600 acres of small grain. (Pratt). NEW MEXICO - Third and fourth-instar nymphs of various species in alfalfa ranged 12-15 per square yard near Tucumcari, Quay County, and 16-25 per 25 sweeps at Espanola, Rio Arriba County. (N.M. Coop. Rpt.).

IDAHO - Current control of rangeland grasshoppers involves 436,000 acres in Power, Minidoka, Bingham, and Blaine Counties; 120,000 acres near Donnelly, Lake Fork, and McCall, Valley County; and 40,000 acres in Preston area of Franklin County. First to third-instar nymphs and few adults present, due to fluctuating weather conditions. General population about one-third the size of that present at this time in 1972. Controls being considered for desert area, fringe crop area, and Bureau of Land Management areas. (Pollard). NEVADA - Steiroxys sp. ranged 2-8 per square yard on 2,000+ acres of rangeland in Santa Rosa Range, Humboldt County. (Barclay, Rowe). Melanoplus sanguinipes with some M. bivittatus averaged 15 adults and late-instar nymphs per square yard on 550 acres of seed alfalfa at Jungo, Humboldt County. Treatments applied. (Stitt). These species in same ratio averaged 12 per square yard on 2,000 acres of alfalfa at Montello, Elko County. Treatments to be applied. Primarily Camnula pellucida, but with some Melanoplus sanguinipes at northern part of infestation, ranged 12-50 per square yard on 6,100 acres of meadowland and rangeland near Montello, Eldo County. C. pellucida averaged 50 per square yard and mating on 3,000-4,000 acres of this meadowland. Treatments to be applied. (Giles, Wilson). WASHINGTON - Controls underway for economic populations of Melanoplus sanguinipes and other rangeland species on Colville Indian Reservation in Okanogan County from Nespelem to Omak Lake; 75,000 of 100,000 acres treated. (Jackson).

MORMON CRICKET (Anabrus simplex) - NEVADA - Averaged one per square yard on 200 acres of rangeland in Santa Rosa Range, Humboldt County. (Barclay, Rowe). Averaged one per square rod on 25 acres near Red Rock, Washoe County. (Adams, Clark).

GYPSY MOTH (Porthetria dispar) - MAINE - Larvae pupated in most areas, emergence expected soon. Solitary larvae and very light infestations common over much of southwestern part of State. Defoliation moderate to heavy at Turner, Androscoggin County; Pittson, Kennebec County; and Brownfield, Oxford County. (Gall). NEW HAMPSHIRE - Larvae began pupating at Eaton, Carroll County, July 11. (Reeves). Survey revealed population at lowest level in history of infestation. Defoliated 10-20 acres near Bellows Falls, Windham County. At one time, pest defoliated more than 500,000 acres in State. (Bowman). MARYLAND - New female pupae found at Elk Neck State Forest and Craigtown in Cecil County. (State Dept. Agr.).

JAPANESE BEETLE (Popillia japonica) - NEW HAMPSHIRE - Adults caused noticeable damage to ornamental shrubs and flowers. (Bowman). ALABAMA - Adults (75) trapped as of July 11 in 1.5-mile radius within city limits of Heflin, Cleburne County. (Burke, Stewart). TENNESSEE - Adults found by visual survey on U.S. Interstate Highway 81 outside known infested area of Washington County. (Walker, Snodgrass). MICHIGAN - Heavy adult emergence reported at Devils Lake Golf Course, Lenawee County, and at Marywood Golf Course, Calhoun County. (Moore).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Moderate to heavy on rangeland at Roy, Harding County. (N.M. Coop. Rpt.).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Treatments made in several cotton fields in Litchfield area, Maricopa County. In Yuma County, 6-day control schedules reported in Roll area in few "hot spot" fields; 6-day schedules reported in Yuma Valley except for few "hot spots" on 3-day schedule. One moth found in trap at Bowie, Cochise County. (Ariz. Coop. Sur.).

WHITEFRINGED BEETLES (Graphognathus spp.) - ALABAMA - Larvae destroyed about one acre of soybeans in 10-acre field at Goodway, Monroe County. (T. Lemons, S. Lemons). Larvae destroyed second planting of 6-acre cotton field at Loachapoka, Lee County. (Nunn et al.).

HAWAII INSECT REPORT

Turf and Pasture - Adults of a SKIPPER (Hylephila phyleus) light about flowers in 1,000 square feet of ornamental lantana at Mililani Memorial Park, Oahu. About one adult per 2 square yards with no discernible damage to surrounding zoysia grass. (Kawamura).

Cucurbits - Larval mines of LEAFMINER FLIES (Liriomyza spp.) moderate, especially in older leaves, in 40 acres of watermelon at Mililani, Oahu; adults trace. (Kawamura).

Beneficial Insects - Parasitism of Melanagromyza phaseoli (bean fly) in infested snap bean and cowpea petioles collected from 5 sampling sites on Kauai ranged 59-100 percent; parasitism by BRACONID WASPS (Opius phaseoli and O. importatus) averaged 84 percent. Similar sampling at Waikapu, Maui, yielded 100 percent parasitism; 67 percent by O. importatus, 33 percent by a PTEROMALID WASP (Halticoptera patellana). (Sugawa, Miyahira). Larvae of MELASTOMA BORER (Selca brunella) infested relatively high percentages of fruits (55 percent) and terminals (79 percent) of Melastoma malabathricum at Hilo, Hawaii, during June. This compares with 39 percent for fruits and terminals in 1972. On Kauai, eximiation of fruits at Hanahanapuni and Knudsen Gap revealed 7 and 2 percent infestation, respectively. (Yoshioka, Sugawa). All stages of a TINGID BUG (Leptobyrsa decora) remained moderately active on lantana at Ulupalakua and Wailuku, Maui, during June. LANTANA A HISPID (Uroplata girardi) fairly active at Kahului, Waihee, and Wailuku. On Hawaii, U. girardi activity generally light on roadside lantana at Hilea and Keaau; mining affected less than 5 percent of leaves, but was moderate to heavy in spots at Keaau with up to 80 percent of leaves with at least one mine. Adults moderate at Keaau, light at Hilea. A LANTANA CERAMBYCID (Plagrohammus spinipennis) activity generally light on wayside lantana at Keaau and Hilea. On Maui, larvae and adults of LANTANA LEAF BEETLE (Octotoma scabripennis) recovered for first time in pasture at Wailuku during June. Releases made at Ulupalakua in August and September 1972 (18 miles away) and at Haiku in July 1964 (15 miles away). (Miyahira, Matayoshi).

Miscellaneous Pests - Only limited GIANT AFRICAN SNAIL (Achatina fulica) activity observed in residential areas at Poipu, Kauai, during June; nil at Wahiawa. Baiting and surveillance continued at Wahiawa. (Sugawa).

LIGHT TRAP COLLECTIONS

State	Locality	Tempera- ture, °F.	Precep- tation	Type of trap	Arctic species		Patagonian species		Tropical species		Subtropical species		Tropical species		Tropical species		Tropical species		Tropical species		Tropical species			
					0 = absent	1 = rare	2 = common	3 = abundant	4 = very abundant	5 = very abundant	6 = very abundant	7 = very abundant	8 = very abundant	9 = very abundant	10 = very abundant	11 = very abundant	12 = very abundant	13 = very abundant	14 = very abundant	15 = very abundant	16 = very abundant	17 = very abundant	18 = very abundant	19 = very abundant
ARKANSAS	Kelso 7/12-18 Newport 7/11-17			BL	1	2	7	8																
ARIZONA (County)	Maricopa 7/9-15			BL	6		20																	
FLORIDA	Gainesville 7/13-19			BL	1																			
ILLINOIS (County)	Ogle 7/10-16			2BL	91																			
INDIANA (Counties)	Lawrence 7/5-11 Tippecanoe 7/5-11			BL	17	5																		
					57	8																		
IOWA	Beaconsfield 7/6-12 Gilbert 7/6-12			BL	99																			
					32																			
KANSAS	Goodland 7/12 Tribune 7/11-12			BL	17																			
					1																			
KENTUCKY	Lexington 7/20 Princeton 7/12-18			BL	6																			
					30	2																		
MINNESOTA	Crookston 7/12-18 Fergus Falls 7/12-18			BL																				
MISSISSIPPI	Stoneville 7/13-19	68-92	0.89	2BL	31	1																		
MISSOURI	Portageville 7/13-19			BL	16																			

LIGHT TRAP COLLECTIONS

	Temperature Average	Precipitation (inches)	Station	Type of trap	Agrotis		Eutimena		Farrula		Hyalocampa		Manduca		Periploca		Scolopota		Tetralopha		
					Blacklight I = independent 0 = other	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain	Grain
NEBRASKA North Platte 7/11-19 Scotts Bluff 7/11-19					2	4															
					7	16															
NEW HAMPSHIRE Lee 7/15					3																
NORTH DAKOTA Bismarck 7/13,16,19 Fargo 7/13,15,17,19																					
OHIO Wooster 7/13-19					190																
PENNSYLVANIA (Districts) Central 7/6-16 Northeast 7/6-16					7																
					3																
SOUTH DAKOTA Brookings 7/13-19					16																
									64												
TENNESSEE (Counties) Gibson 7/16-20 Madison 7/16-20					29																
					8																
VIRGINIA Painter 7/10-16 Warsaw 7/10-16					3																
					8																
WEST VIRGINIA (Counties) Kanawha 7/17 Monroe 7/16					3																
					6																
WISCONSIN Lancaster 7/9-16 Mazomanie 7/12-15					6																
					2																

Notice of Name Changes in Ants and Sawflies
(Hymenoptera: Formicidae, Tenthredinidae)

David R. Smith 1/

This is to call attention to several name changes for some rather commonly collected ants and sawflies.

Nylanderia Emery (Formicidae). In most North American literature, this has been considered a subgenus of Paratrechina Motschoulsky. Kempf, in his catalog of Neotropical ants (1972, Studia Ent. 15(1-4):3-344), formally raised Nylanderia to generic status. All species in the United States listed under the subgenus Nylanderia should now utilize the genus name Nylanderia. The only species of Paratrechina in the United States is P. longicornis (Latreille), the crazy ant.

Conomyrma Forel (Formicidae). This has been considered by many as a subgenus of Dorymyrmex Mayr. According to Snelling (1973, Los Angeles Co. Nat. Hist. Mus., Contrib. in Sci., no. 238, 6 pp.), Conomyrma is a valid genus, and the three United States species previously placed in Dorymyrmex should now be placed in Conomyrma. Also, the species known as Dorymyrmex pyramicus (Roger) in the United States is now called Conomyrma insana (Buckley), the pyramid ant. All references by authors to pyramicus in the United States should be referred to insana. The other two species of Conomyrma in this country are C. bicolor (Wheeler) and C. flavopectus (M. Smith). Dorymyrmex and D. pyramicus are still valid taxa, but are found only in the Neotropical region.

Caliroa O. Costa (Tenthredinidae). During a number of years, Caliroa lineata MacGillivray has been reported as a defoliator of oaks. In my revision of this genus (Smith, 1971, U.S. Dept. Agr. Tech. Bul. 1420, 84 pp.), I placed lineata as a synonym of Caliroa liturata MacGillivray, a species which feeds on peach and plum. There are five species of Caliroa in eastern North America known to feed on oaks, and previous reports of C. lineata on oaks could refer to any one of them. Larvae are not known for all the oak-feeding species; therefore, it is not possible to identify larvae to species. Larval collections should be referred to the genus name only unless associated adults are obtained.

In summary:

<u>Previous Designation</u>	<u>Present Designation</u>
<u>Paratrechina (Nylanderia)</u>	<u>Nylanderia</u>
<u>Dorymyrmex (in United States)</u>	<u>Conomyrma</u>
<u>Dorymyrmex pyramicus (Roger)</u> (in United States)	<u>Conomyrma insana (Buckley)</u> pyramid ant
<u>Dorymyrmex flavopectus</u> M.R. Smith	<u>Conomyrma flavopectus</u> (M.R. Smith)
<u>Dorymyrmex bicolor</u> Wheeler	<u>Conomyrma bicolor (Wheeler)</u>
<u>Caliroa lineata</u> MacGillivray	<u>Caliroa liturata</u> MacGillivray
<u>Caliroa lineata</u> of authors as an oak feeder	<u>Caliroa sp.</u> ; any one of five species

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WEATHER OF THE WEEK ENDING JULY 23

Reprinted from Weekly Weather and Crop Bulletin supplied by Environmental Data Service, NOAA.

HIGHLIGHTS: Rains provided short term relief in parts of the Northwest drought area. They drenched Kansas, another dry area, with 2 to 6 inches of water. Temperatures stayed mostly subnormal except in the Northwest, gulf, and Great Lakes areas.

PRECIPITATION: Some rain fell over parts of the Northwest drought area, it will provide only short term relief. Kansas, another dry area, received 2 inches over most of State. The week's highest concentration of rain occurred along the Kansas and Nebraska border where 6 inches fell. The 2-inch pattern stretched from Kansas, east through the Corn Belt. Monday, a High in the gulf pumped warm, moist air into the face of the cold front stretching from the Carolinas through the Deep South, Arkansas and Texas. Showers and thunderstorms erupted along the front. San Antonio, Texas, got 0.81 inch in the wee hours with 0.77 inch pouring down in 1 hour. The San Antonio area had by then received over 6 inches of rain over a period of several days with considerable flooding. By late Monday, Fort Worth, Texas, had accumulated 8.65 inches of rain making this the wettest July on record. Monday evening thundershowers erupted from Mississippi to the Carolina coast and north into Maryland. Hickory, North Carolina, received 2 inches and Lynchburg, Virginia, 2.61 inches Tuesday morning. Wednesday, a band of thunderstorms erupted across Nebraska and the upper Mississippi Valley along a cold front that extended from a Low over the Hudson Bay. Many of these storms produced heavy thundershowers and some violent weather. Wednesday night and Thursday morning torrential rains hit northwest Kansas. Over 4 inches fell in numerous places there, 5 inches fell in some. Over 1 inch fell at Topeka in 1 hour Wednesday night. Thursday afternoon, Topeka had received 4 inches during 24 hours. While some flash flooding did occur, it was not severe because of the extremely dry conditions before the rain. Thursday, rains moved east over Kansas and into Iowa and north Missouri. During the evening, central Kansas got 2 inches more rain. Thursday night, Hurricane Doreen, with her 115 m.p.h. winds, lay 850 miles southwest of Mexico. Moving west and posing no threat to the California weather, she threatened California's coast with dangerous surf. Friday, the storm system moved east but Kansas continued to receive rain. An additional 2.50 inches fell at Topeka bringing the 24-hour total to over 7 inches. Kansas City, Missouri, also received 1.50 inches of rain Friday morning. Saturday morning, 3.70 inches of rain fell in 1 hour just north of Columbia, Missouri. Widespread flooding occurred isolating some people. Louisville, Kentucky, got 2.04 inches of rain in 51 minutes. A second storm raised the Louisville total to 4 inches. The storm spread eastward arriving late Saturday at Atlantic beaches to drench weekenders. Sunday was mostly sunny across the Nation except in the East.

TEMPERATURE: The Nation enjoyed a cooler than average mid-July week. Most of the western Corn Belt, the Plains, the Rockies, and the Pacific areas averaged from 3-6 degrees below the norm. One area, embracing parts of 6 States from Nebraska to Utah, then curving south into Arizona and New Mexico was 9 degrees subnormal.

Areas where the mercury averaged above normal--the gulf area, western Great Lakes, and the Northwest drought area were by and large within 3 degrees of the norm. Early Monday, cool air spread across the Nation except for the West and the gulf. Morning temperatures averaged 10 degrees subnormal throughout the mid-Mississippi Valley and part of the Plains. Midday temperatures got to the 70's and 80's although the low 90's were common along the gulf. Tuesday morning temperatures cooled to lows in the 50's and 60's over North Dakota as a cold front pushed south through the Plains. Ahead of the front, South Dakota hit 100 degrees; behind it, afternoon temperatures in Montana reached only into the 60's. Wednesday a Canadian High gave the front a push and by the end of the day it had crossed most of the northern Plains. Thursday morning was cold, 42 degrees at Bradford, Pennsylvania, and Flagstaff, Arizona. Temperatures stayed mostly in the 70's and 80's nationwide and California recorded both extremes - 56 degrees at Arcata on the north coast and 104 degrees at Palm Springs. Friday a cool air mass still remained in the northern Plains. The lowest reading was 43 degrees at Grand Forks, North Dakota. Then cool air invaded Wyoming, holding the afternoon highs in the 50's. Cold then spread east, southern Wisconsin readings averaged 20 degrees subnormal on Saturday. Sunday, highs in the mid-Missouri Valley held in the 60's.

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